



1/33

SEQUENCE LISTING

<110> Markowitz, Sanford D.

<120> METHODS AND COMPOSITIONS FOR  
CATEGORIZING PATIENTS

<130> CWRU-P03-003

<140> US 10/649,591

<141> 2003-08-26

<150> US 10/229,345

<151> 2002-08-26

<150> US 10/274,177

<151> 2002-10-18

<160> 28

<170> FastSEQ for Windows Version 4.0

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<212> PRT

<213> Homo sapiens

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Arg	Thr	Arg	His	Ile	Leu	Ile	Asp	Asn	Gly	Gly	Glu	Leu	His	Ala	Gly
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Ser	Ala	Leu	Cys	Pro	Phe	Gln	Gly	Asn	Phe	Thr	Ile	Ile	Leu	Tyr	Gly
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Glu	Gly	Gly	Tyr	Phe	Phe	Glu	Arg	Ser	Trp	Gly	His	Arg	Gly	Val	Ile
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Val	His	Val	Ile	Asp	Pro	Lys	Ser	Gly	Thr	Val	Ile	His	Ser	Asp	Arg
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Phe	Asp	Thr	Tyr	Arg	Ser	Lys	Lys	Glu	Ser	Glu	Arg	Leu	Val	Gln	Tyr
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Leu	Asn	Ala	Val	Pro	Asp	Gly	Arg	Ile	Leu	Ser	Val	Ala	Val	Asn	Asp
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Glu	Gly	Ser	Arg	Asn	Leu	Asp	Met	Ala	Arg	Lys	Ala	Met	Thr	Lys	
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Leu	Gly	Ser	Lys	His	Phe	Leu	His	Leu	Gly	Phe	Arg	His	Pro	Trp	Ser
225					230					235					240

Phe	Leu	Thr	Val	Lys	Gly	Asn	Pro	Ser	Ser	Ser	Val	Glu	Asp	His	Ile		
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Glu	Tyr	His	Gly	His	Arg	Gly	Ser	Ala	Ala	Ala	Arg	Val	Phe	Lys	Leu		
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Phe	Gln	Thr	Glu	His	Gly	Glu	Tyr	Phe	Asn	Val	Ser	Leu	Ser	Ser	Glu		
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Trp	Val	Gln	Asp	Val	Glu	Trp	Thr	Glu	Trp	Phe	Asp	His	Asp	Lys	Val		
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Pro	Gly	Lys	Ile	Cys	Asn	Arg	Pro	Ile	Asp	Ile	Gln	Ala	Thr	Thr	Met		
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Tyr	Arg	Phe	Ala	Cys	Tyr	Asp	Arg	Gly	Arg	Ala	Cys	Arg	Ser	Tyr	Arg		
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Val	Arg	Phe	Leu	Cys	Gly	Lys	Pro	Val	Arg	Pro	Lys	Leu	Thr	Val	Thr		
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Ile	Asp	Thr	Asn	Val	Asn	Ser	Thr	Ile	Leu	Asn	Leu	Glu	Asp	Asn	Val		
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Gln	Ser	Trp	Lys	Pro	Gly	Asp	Thr	Leu	Val	Ile	Ala	Ser	Thr	Asp	Tyr		
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Ser	Met	Tyr	Gln	Ala	Glu	Glu	Phe	Gln	Val	Leu	Pro	Cys	Arg	Ser	Cys		
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Gly	Glu	Glu	Ile	Asp	Gly	Val	Asp	Met	Arg	Ala	Glu	Val	Gly	Leu	Leu		
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Ser	Arg	Asn	Ile	Ile	Val	Met	Gly	Glu	Met	Glu	Asp	Lys	Cys	Tyr	Pro		
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Tyr	Arg	Asn	His	Ile	Cys	Asn	Phe	Phe	Asp	Phe	Asp	Thr	Phe	Gly	Gly		
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His	Ile	Lys	Phe	Ala	Leu	Gly	Phe	Lys	Ala	Ala	His	Leu	Glu	Gly	Thr		
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Glu	Leu	Lys	His	Met	Gly	Gln	Gln	Leu	Val	Gly	Gln	Tyr	Pro	Ile	His		
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Phe	His	Leu	Ala	Gly	Asp	Val	Asp	Glu	Arg	Gly	Gly	Tyr	Asp	Pro	Pro		
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Thr	Tyr	Ile	Arg	Asp	Leu	Ser	Ile	His	His	Thr	Phe	Ser	Arg	Cys	Val		
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	690					695					700						

Ala	Gly	Met	Ile	Ile	Asp	Asn	Gly	Val	Lys	Thr	Thr	Glu	Ala	Ser	Ala	705	710	715	720
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His	Gln	Asp	Ala	Asp	Pro	Leu	Lys	Pro	Arg	Glu	Pro	Ala	Ile	Ile	Arg	740	745	750	
His	Phe	Ile	Ala	Tyr	Lys	Asn	Gln	Asp	His	Gly	Ala	Trp	Leu	Arg	Gly	755	760	765	
Gly	Asp	Val	Trp	Leu	Asp	Ser	Cys	Arg	Phe	Ala	Asp	Asn	Gly	Ile	Gly	770	775	780	
Leu	Thr	Leu	Ala	Ser	Gly	Gly	Thr	Phe	Pro	Tyr	Asp	Asp	Gly	Ser	Lys	785	790	795	800
Gln	Glu	Ile	Lys	Asn	Ser	Leu	Phe	Val	Gly	Glu	Ser	Gly	Asn	Val	Gly	805	810		815
Thr	Glu	Met	Met	Asp	Asn	Arg	Ile	Trp	Gly	Pro	Gly	Gly	Leu	Asp	His	820	825		830
Ser	Gly	Arg	Thr	Leu	Pro	Ile	Gly	Gln	Asn	Phe	Pro	Ile	Arg	Gly	Ile	835	840		845
Gln	Leu	Tyr	Asp	Gly	Pro	Ile	Asn	Ile	Gln	Asn	Cys	Thr	Phe	Arg	Lys	850	855		860
Phe	Val	Ala	Leu	Glu	Gly	Arg	His	Thr	Ser	Ala	Leu	Ala	Phe	Arg	Leu	865	870		880
Asn	Asn	Ala	Trp	Gln	Ser	Cys	Pro	His	Asn	Asn	Val	Thr	Gly	Ile	Ala	885	890		895
Phe	Glu	Asp	Val	Pro	Ile	Thr	Ser	Arg	Val	Phe	Phe	Gly	Glu	Pro	Gly	900	905		910
Pro	Trp	Phe	Asn	Gln	Leu	Asp	Met	Asp	Gly	Asp	Lys	Thr	Ser	Val	Phe	915	920		925
His	Asp	Val	Asp	Gly	Ser	Val	Ser	Glu	Tyr	Pro	Gly	Ser	Tyr	Leu	Thr	930	935		940
Lys	Asn	Asp	Asn	Trp	Leu	Val	Arg	His	Pro	Asp	Cys	Ile	Asn	Val	Pro	945	950		960
Asp	Trp	Arg	Gly	Ala	Ile	Cys	Ser	Gly	Cys	Tyr	Ala	Gln	Met	Tyr	Ile	965	970		975
Gln	Ala	Tyr	Lys	Thr	Ser	Asn	Leu	Arg	Met	Lys	Ile	Ile	Lys	Asn	Asp	980	985		990
Phe	Pro	Ser	His	Pro	Leu	Tyr	Leu	Glu	Gly	Ala	Leu	Thr	Arg	Ser	Thr	995	1000		1005
His	Tyr	Gln	Gln	Tyr	Gln	Pro	Val	Val	Thr	Leu	Gln	Lys	Gly	Tyr	Thr	1010	1015		1020
Ile	His	Trp	Asp	Gln	Thr	Ala	Pro	Ala	Glu	Leu	Ala	Ile	Trp	Leu	Ile	1025	1030		1035
Asn	Phe	Asn	Lys	Gly	Asp	Trp	Ile	Arg	Val	Gly	Leu	Cys	Tyr	Pro	Arg	1045	1050		1055
Gly	Thr	Thr	Phe	Ser	Ile	Leu	Ser	Asp	Val	His	Asn	Arg	Leu	Leu	Lys	1060	1065		1070
Gln	Thr	Ser	Lys	Thr	Gly	Val	Phe	Val	Arg	Thr	Leu	Gln	Met	Asp	Lys	1075	1080		1085
Val	Glu	Gln	Ser	Tyr	Pro	Gly	Arg	Ser	His	Tyr	Tyr	Trp	Asp	Glu	Asp	1090	1095		1100
Ser	Gly	Leu	Leu	Phe	Leu	Lys	Leu	Lys	Ala	Gln	Asn	Glu	Arg	Glu	Lys	1105	1110		1115
Phe	Ala	Phe	Cys	Ser	Met	Lys	Gly	Cys	Glu	Arg	Ile	Lys	Ile	Lys	Ala	1125	1130		1135
Leu	Ile	Pro	Lys	Asn	Ala	Gly	Val	Ser	Asp	Cys	Thr	Ala	Thr	Ala	Tyr	1140	1145		1150
Pro	Lys	Phe	Thr	Glu	Arg	Ala	Val	Val	Asp	Val	Pro	Met	Pro	Lys	Lys	1155	1160		1165

Leu Phe Gly Ser Gln Leu Lys Thr Lys Asp His Phe Leu Glu Val Lys  
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 Met Glu Ser Ser Lys Gln His Phe Phe His Leu Trp Asn Asp Phe Ala  
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 Tyr Ile Glu Val Asp Gly Lys Lys Tyr Pro Ser Ser Glu Asp Gly Ile  
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 Ser Phe Arg Asn Ser Ile Leu Gln Gly Ile Pro Trp Gln Leu Phe Asn  
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 Tyr Val Ala Thr Ile Pro Asp Asn Ser Ile Val Leu Met Ala Ser Lys  
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 Gly Arg Tyr Val Ser Arg Gly Pro Trp Thr Arg Val Leu Glu Lys Leu  
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 Gly Ala Asp Arg Gly Leu Lys Leu Lys Glu Gln Met Ala Phe Val Gly  
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 Phe Lys Gly Ser Phe Arg Pro Ile Trp Val Thr Leu Asp Thr Glu Asp  
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 Leu Thr Ser Ser Ala Thr Val Tyr Ser Ile His Ile Ser Glu Gly Gly  
 35 40 45  
 Lys Leu Val Ile Lys Asp His Asp Glu Pro Ile Val Leu Arg Thr Arg  
 50 55 60  
 His Ile Leu Ile Asp Asn Gly Gly Glu Leu His Ala Gly Ser Ala Leu  
 65 70 75 80  
 Cys Pro Phe Gln Gly Asn Phe Thr Ile Ile Leu Tyr Gly Arg Ala Asp  
 85 90 95  
 Glu Gly Ile Gln Pro Asp Pro Tyr Tyr Gly Leu Lys Tyr Ile Gly Val  
 100 105 110  
 Gly Lys Gly Gly Ala Leu Glu Leu His Gly Gln Lys Lys Leu Ser Trp  
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 Thr Phe Leu Asn Lys Thr Leu His Pro Gly Gly Met Ala Glu Gly Gly  
 130 135 140  
 Tyr Phe Phe Glu Arg Ser Trp Gly His Arg Gly Val Ile Val His Val  
 145 150 155 160  
 Ile Asp Pro Lys Ser Gly Thr Val Ile His Ser Asp Arg Phe Asp Thr  
 165 170 175  
 Tyr Arg Ser Lys Lys Glu Ser Glu Arg Leu Val Gln Tyr Leu Asn Ala  
 180 185 190  
 Val Pro Asp Gly Arg Ile Leu Ser Val Ala Val Asn Asp Glu Gly Ser  
 195 200 205  
 Arg Asn Leu Asp Asp Met Ala Arg Lys Ala Met Thr Lys Leu Gly Ser  
 210 215 220

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Val	Lys	Gly	Asn	Pro	Ser	Ser	Ser	Val	Glu	Asp	His	Ile	Glu	Tyr	His
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Gly	His	Arg	Gly	Ser	Ala	Ala	Ala	Arg	Val	Phe	Lys	Leu	Phe	Gln	Thr
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Glu	His	Gly	Glu	Tyr	Phe	Asn	Val	Ser	Leu	Ser	Ser	Glu	Trp	Val	Gln
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Asp	Val	Glu	Trp	Thr	Glu	Trp	Phe	Asp	His	Asp	Lys	Val	Ser	Gln	Thr
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Ile	Cys	Asn	Arg	Pro	Ile	Asp	Ile	Gln	Ala	Thr	Thr	Met	Asp	Gly	Val
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Ala	Cys	Tyr	Asp	Arg	Gly	Arg	Ala	Cys	Arg	Ser	Tyr	Arg	Val	Arg	Phe
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Leu	Cys	Gly	Lys	Pro	Val	Arg	Pro	Lys	Leu	Thr	Val	Thr	Ile	Asp	Thr
370						375					380				
Asn	Val	Asn	Ser	Thr	Ile	Leu	Asn	Leu	Glu	Asp	Asn	Val	Gln	Ser	Trp
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Lys	Pro	Gly	Asp	Thr	Leu	Val	Ile	Ala	Ser	Thr	Asp	Tyr	Ser	Met	Tyr
				405					410					415	
Gln	Ala	Glu	Glu	Phe	Gln	Val	Leu	Pro	Cys	Arg	Ser	Cys	Ala	Pro	Asn
			420					425					430		
Gln	Val	Lys	Val	Ala	Gly	Lys	Pro	Met	Tyr	Leu	His	Ile	Gly	Glu	Glu
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Ile	Asp	Gly	Val	Asp	Met	Arg	Ala	Glu	Val	Gly	Leu	Leu	Ser	Arg	Asn
450					455						460				
Ile	Ile	Val	Met	Gly	Glu	Met	Glu	Asp	Lys	Cys	Tyr	Pro	Tyr	Arg	Asn
465					470				475						480
His	Ile	Cys	Asn	Phe	Phe	Asp	Phe	Asp	Thr	Phe	Gly	Gly	His	Ile	Lys
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Phe	Ala	Leu	Gly	Phe	Lys	Ala	Ala	His	Leu	Glu	Gly	Thr	Glu	Leu	Lys
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His	Met	Gly	Gln	Gln	Leu	Val	Gly	Gln	Tyr	Pro	Ile	His	Phe	His	Leu
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Ala	Gly	Asp	Val	Asp	Glu	Arg	Gly	Gly	Tyr	Asp	Pro	Pro	Thr	Tyr	Ile
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Gly	Ser	Asn	Gly	Leu	Leu	Ile	Lys	Asp	Val	Val	Gly	Tyr	Asn	Ser	Leu
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Gly	His	Cys	Phe	Phe	Thr	Glu	Asp	Gly	Pro	Glu	Glu	Arg	Asn	Thr	Phe
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Asp	His	Cys	Leu	Gly	Leu	Leu	Val	Lys	Ser	Gly	Thr	Leu	Leu	Pro	Ser
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Asp	Arg	Asp	Ser	Lys	Met	Cys	Lys	Met	Ile	Thr	Glu	Asp	Ser	Tyr	Pro
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Gly	Tyr	Ile	Pro	Lys	Pro	Arg	Gln	Asp	Cys	Asn	Ala	Val	Ser	Thr	Phe
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Trp	Met	Ala	Asn	Pro	Asn	Asn	Asn	Leu	Ile	Asn	Cys	Ala	Ala	Ala	Gly
				645				650						655	
Ser	Glu	Glu	Thr	Gly	Phe	Trp	Phe	Ile	Phe	His	His	Val	Pro	Thr	Gly
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Pro	Ser	Val	Gly	Met	Tyr	Ser	Pro	Gly	Tyr	Ser	Glu	His	Ile	Pro	Leu
		675					680					685			

Gly	Lys	Phe	Tyr	Asn	Asn	Arg	Ala	His	Ser	Asn	Tyr	Arg	Ala	Gly	Met
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Ile	Ile	Asp	Asn	Gly	Val	Lys	Thr	Thr	Glu	Ala	Ser	Ala	Lys	Asp	Lys
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Arg	Pro	Phe	Leu	Ser	Ile	Ile	Ser	Ala	Arg	Tyr	Ser	Pro	His	Gln	Asp
			725						730					735	
Ala	Asp	Pro	Leu	Lys	Pro	Arg	Glu	Pro	Ala	Ile	Ile	Arg	His	Phe	Ile
		740					745						750		
Ala	Tyr	Lys	Asn	Gln	Asp	His	Gly	Ala	Trp	Leu	Arg	Gly	Gly	Asp	Val
	755						760					765			
Trp	Leu	Asp	Ser	Cys	Arg	Phe	Ala	Asp	Asn	Gly	Ile	Gly	Leu	Thr	Leu
770						775				780					
Ala	Ser	Gly	Gly	Thr	Phe	Pro	Tyr	Asp	Asp	Gly	Ser	Lys	Gln	Glu	Ile
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Lys	Asn	Ser	Leu	Phe	Val	Gly	Glu	Ser	Gly	Asn	Val	Gly	Thr	Glu	Met
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Met	Asp	Asn	Arg	Ile	Trp	Gly	Pro	Gly	Gly	Leu	Asp	His	Ser	Gly	Arg
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Thr	Leu	Pro	Ile	Gly	Gln	Asn	Phe	Pro	Ile	Arg	Gly	Ile	Gln	Leu	Tyr
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Asp	Gly	Pro	Ile	Asn	Ile	Gln	Asn	Cys	Thr	Phe	Arg	Lys	Phe	Val	Ala
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Leu	Glu	Gly	Arg	His	Thr	Ser	Ala	Leu	Ala	Phe	Arg	Leu	Asn	Asn	Ala
865				870						875					880
Trp	Gln	Ser	Cys	Pro	His	Asn	Asn	Val	Thr	Gly	Ile	Ala	Phe	Glu	Asp
			885					890						895	
Val	Pro	Ile	Thr	Ser	Arg	Val	Phe	Phe	Gly	Glu	Pro	Gly	Pro	Trp	Phe
		900					905					910			
Asn	Gln	Leu	Asp	Met	Asp	Gly	Asp	Lys	Thr	Ser	Val	Phe	His	Asp	Val
	915					920					925				
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930					935					940					
Asn	Trp	Leu	Val	Arg	His	Pro	Asp	Cys	Ile	Asn	Val	Pro	Asp	Trp	Arg
945				950						955					960
Gly	Ala	Ile	Cys	Ser	Gly	Cys	Tyr	Ala	Gln	Met	Tyr	Ile	Gln	Ala	Tyr
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Lys	Thr	Ser	Asn	Leu	Arg	Met	Lys	Ile	Ile	Lys	Asn	Asp	Phe	Pro	Ser
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His	Pro	Leu	Tyr	Leu	Glu	Gly	Ala	Leu	Thr	Arg	Ser	Thr	His	Tyr	Gln
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Asp	Gln	Thr	Ala	Pro	Ala	Glu	Leu	Ala	Ile	Trp	Leu	Ile	Asn	Phe	Asn
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Lys	Gly	Asp	Trp	Ile	Arg	Val	Gly	Leu	Cys	Tyr	Pro	Arg	Gly	Thr	Thr
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Phe	Ser	Ile	Leu	Ser	Asp	Val	His	Asn	Arg	Leu	Leu	Lys	Gln	Thr	Ser
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Lys	Thr	Gly	Val	Phe	Val	Arg	Thr	Leu	Gln	Met	Asp	Lys	Val	Glu	Gln
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Ser	Tyr	Pro	Gly	Arg	Ser	His	Tyr	Tyr	Trp	Asp	Glu	Asp	Ser	Gly	Leu
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Leu	Phe	Leu	Lys	Leu	Lys	Ala	Gln	Asn	Glu	Arg	Glu	Lys	Phe	Ala	Phe
1105				1110						1115					1120
Cys	Ser	Met	Lys	Gly	Cys	Glu	Arg	Ile	Lys	Ile	Lys	Ala	Leu	Ile	Pro
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 Ser Gln Leu Lys Thr Lys Asp His Phe Leu Glu Val Lys Met Glu Ser  
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 Thr Pro Asp Cys Arg Val Glu Ala His Pro Cys Glu His Arg Thr Leu  
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<400> 4

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&lt;211&gt; 2810

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5

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&lt;211&gt; 1524

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 6

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&lt;211&gt; 3205

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;211&gt; 2603

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 8

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&lt;213&gt; Homo sapiens

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&lt;222&gt; 1161

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 9

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<212> DNA
<213> Homo sapiens

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&lt;211&gt; 2336

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 12

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&lt;211&gt; 1361

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 13

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Ser	Lys	His	Phe	Leu	His	Leu	Gly	Phe	Arg	His	Pro	Trp	Ser	Phe	Leu	260	265	270	
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His	Gly	His	Arg	Gly	Ser	Ala	Ala	Ala	Arg	Val	Phe	Lys	Leu	Phe	Gln	290	295	300	
Thr	Glu	His	Gly	Glu	Tyr	Phe	Asn	Val	Ser	Leu	Ser	Ser	Glu	Trp	Val	305	310	315	320
Gln	Asp	Val	Glu	Trp	Thr	Glu	Trp	Phe	Asp	His	Asp	Lys	Val	Ser	Gln	325	330	335	
Thr	Lys	Gly	Gly	Glu	Lys	Ile	Ser	Asp	Leu	Trp	Lys	Ala	His	Pro	Gly	340	345	350	
Lys	Ile	Cys	Asn	Arg	Pro	Ile	Asp	Ile	Gln	Ala	Thr	Thr	Met	Asp	Gly	355	360	365	
Val	Asn	Leu	Ser	Thr	Glu	Val	Val	Tyr	Lys	Lys	Gly	Gln	Asp	Tyr	Arg	370	375	380	
Phe	Ala	Cys	Tyr	Asp	Arg	Gly	Arg	Ala	Cys	Arg	Ser	Tyr	Arg	Val	Arg	385	390	395	400
Phe	Leu	Cys	Gly	Lys	Pro	Val	Arg	Pro	Lys	Leu	Thr	Val	Thr	Ile	Asp	405	410	415	
Thr	Asn	Val	Asn	Ser	Thr	Ile	Leu	Asn	Leu	Glu	Asp	Asn	Val	Gln	Ser	420	425	430	
Trp	Lys	Pro	Gly	Asp	Thr	Leu	Val	Ile	Ala	Ser	Thr	Asp	Tyr	Ser	Met	435	440	445	
Tyr	Gln	Ala	Glu	Glu	Phe	Gln	Val	Leu	Pro	Cys	Arg	Ser	Cys	Ala	Pro	450	455	460	



Asn	Gln	Val	Lys	Val	Ala	Gly	Lys	Pro	Met	Tyr	Leu	His	Ile	Gly	Glu	465	470	475	480
Glu	Ile	Asp	Gly	Val	Asp	Met	Arg	Ala	Glu	Val	Gly	Leu	Leu	Ser	Arg		485	490	495
Asn	Ile	Ile	Val	Met	Gly	Glu	Met	Glu	Asp	Lys	Cys	Tyr	Pro	Tyr	Arg	500	505	510	
Asn	His	Ile	Cys	Asn	Phe	Phe	Asp	Phe	Asp	Thr	Phe	Gly	Gly	His	Ile	515	520	525	
Lys	Phe	Ala	Leu	Gly	Phe	Lys	Ala	Ala	His	Leu	Glu	Gly	Thr	Glu	Leu	530	535	540	
Lys	His	Met	Gly	Gln	Gln	Leu	Val	Gly	Gln	Tyr	Pro	Ile	His	Phe	His	545	550	555	560
Leu	Ala	Gly	Asp	Val	Asp	Glu	Arg	Gly	Gly	Tyr	Asp	Pro	Pro	Thr	Tyr	565	570	575	
Ile	Arg	Asp	Leu	Ser	Ile	His	His	Thr	Phe	Ser	Arg	Cys	Val	Thr	Val	580	585	590	
His	Gly	Ser	Asn	Gly	Leu	Leu	Ile	Lys	Asp	Val	Val	Gly	Tyr	Asn	Ser	595	600	605	
Leu	Gly	His	Cys	Phe	Phe	Thr	Glu	Asp	Gly	Pro	Glu	Glu	Arg	Asn	Thr	610	615	620	
Phe	Asp	His	Cys	Leu	Gly	Leu	Leu	Val	Lys	Ser	Gly	Thr	Leu	Leu	Pro	625	630	635	640
Ser	Asp	Arg	Asp	Ser	Lys	Met	Cys	Lys	Met	Ile	Thr	Glu	Asp	Ser	Tyr	645	650	655	
Pro	Gly	Tyr	Ile	Pro	Lys	Pro	Arg	Gln	Asp	Cys	Asn	Ala	Val	Ser	Thr	660	665	670	
Phe	Trp	Met	Ala	Asn	Pro	Asn	Asn	Asn	Leu	Ile	Asn	Cys	Ala	Ala	Ala	675	680	685	
Gly	Ser	Glu	Glu	Thr	Gly	Phe	Trp	Phe	Ile	Phe	His	His	Val	Pro	Thr	690	695	700	
Gly	Pro	Ser	Val	Gly	Met	Tyr	Ser	Pro	Gly	Tyr	Ser	Glu	His	Ile	Pro	705	710	715	720
Leu	Gly	Lys	Phe	Tyr	Asn	Asn	Arg	Ala	His	Ser	Asn	Tyr	Arg	Ala	Gly	725	730	735	
Met	Ile	Ile	Asp	Asn	Gly	Val	Lys	Thr	Thr	Glu	Ala	Ser	Ala	Lys	Asp	740	745	750	
Lys	Arg	Pro	Phe	Leu	Ser	Ile	Ile	Ser	Ala	Arg	Tyr	Ser	Pro	His	Gln	755	760	765	
Asp	Ala	Asp	Pro	Leu	Lys	Pro	Arg	Glu	Pro	Ala	Ile	Ile	Arg	His	Phe	770	775	780	
Ile	Ala	Tyr	Lys	Asn	Gln	Asp	His	Gly	Ala	Trp	Leu	Arg	Gly	Gly	Asp	785	790	795	800
Val	Trp	Leu	Asp	Ser	Cys	Arg	Phe	Ala	Asp	Asn	Gly	Ile	Gly	Leu	Thr	805	810	815	
Leu	Ala	Ser	Gly	Gly	Thr	Phe	Pro	Tyr	Asp	Asp	Gly	Ser	Lys	Gln	Glu	820	825	830	
Ile	Lys	Asn	Ser	Leu	Phe	Val	Gly	Glu	Ser	Gly	Asn	Val	Gly	Thr	Glu	835	840	845	
Met	Met	Asp	Asn	Arg	Ile	Trp	Gly	Pro	Gly	Gly	Leu	Asp	His	Ser	Gly	850	855	860	
Arg	Thr	Leu	Pro	Ile	Gly	Gln	Asn	Phe	Pro	Ile	Arg	Gly	Ile	Gln	Leu	865	870	875	880
Tyr	Asp	Gly	Pro	Ile	Asn	Ile	Gln	Asn	Cys	Thr	Phe	Arg	Lys	Phe	Val	885	890	895	
Ala	Leu	Glu	Gly	Arg	His	Thr	Ser	Ala	Leu	Ala	Phe	Arg	Leu	Asn	Asn	900	905	910	
Ala	Trp	Gln	Ser	Cys	Pro	His	Asn	Asn	Val	Thr	Gly	Ile	Ala	Phe	Glu	915	920	925	

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 Phe Asn Gln Leu Asp Met Asp Gly Asp Lys Thr Ser Val Phe His Asp  
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 Val Asp Gly Ser Val Ser Glu Tyr Pro Gly Ser Tyr Leu Thr Lys Asn  
 965 970 975  
 Asp Asn Trp Leu Val Arg His Pro Asp Cys Ile Asn Val Pro Asp Trp  
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 Arg Gly Ala Ile Cys Ser Gly Cys Tyr Ala Gln Met Tyr Ile Gln Ala  
 995 1000 1005  
 Tyr Lys Thr Ser Asn Leu Arg Met Lys Ile Ile Lys Asn Asp Phe Pro  
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 Gln Gln Tyr Gln Pro Val Val Thr Leu Gln Lys Gly Tyr Thr Ile His  
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 Trp Asp Gln Thr Ala Pro Ala Glu Leu Ala Ile Trp Leu Ile Asn Phe  
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 Asn Lys Gly Asp Trp Ile Arg Val Gly Leu Cys Tyr Pro Arg Gly Thr  
 1075 1080 1085  
 Thr Phe Ser Ile Leu Ser Asp Val His Asn Arg Leu Leu Lys Gln Thr  
 1090 1095 1100  
 Ser Lys Thr Gly Val Phe Val Arg Thr Leu Gln Met Asp Lys Val Glu  
 1105 1110 1115 1120  
 Gln Ser Tyr Pro Gly Arg Ser His Tyr Tyr Trp Asp Glu Asp Ser Gly  
 1125 1130 1135  
 Leu Leu Phe Leu Lys Leu Lys Ala Gln Asn Glu Arg Glu Lys Phe Ala  
 1140 1145 1150  
 Phe Cys Ser Met Lys Gly Cys Glu Arg Ile Lys Ile Lys Ala Leu Ile  
 1155 1160 1165  
 Pro Lys Asn Ala Gly Val Ser Asp Cys Thr Ala Thr Ala Tyr Pro Lys  
 1170 1175 1180  
 Phe Thr Glu Arg Ala Val Val Asp Val Pro Met Pro Lys Lys Leu Phe  
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 Gly Ser Gln Leu Lys Thr Lys Asp His Phe Leu Glu Val Lys Met Glu  
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 Ser Ser Lys Gln His Phe Phe His Leu Trp Asn Asp Phe Ala Tyr Ile  
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 Glu Val Asp Gly Lys Lys Tyr Pro Ser Ser Glu Asp Gly Ile Gln Val  
 1235 1240 1245  
 Val Val Ile Asp Gly Asn Gln Gly Arg Val Val Ser His Thr Ser Phe  
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 Arg Asn Ser Ile Leu Gln Gly Ile Pro Trp Gln Leu Phe Asn Tyr Val  
 1265 1270 1275 1280  
 Ala Thr Ile Pro Asp Asn Ser Ile Val Leu Met Ala Ser Lys Gly Arg  
 1285 1290 1295  
 Tyr Val Ser Arg Gly Pro Trp Thr Arg Val Leu Glu Lys Leu Gly Ala  
 1300 1305 1310  
 Asp Arg Gly Leu Lys Leu Lys Glu Gln Met Ala Phe Val Gly Phe Lys  
 1315 1320 1325  
 Gly Ser Phe Arg Pro Ile Trp Val Thr Leu Asp Thr Glu Asp His Lys  
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 Ala Lys Ile Phe Gln Val Val Pro Ile Pro Val Val Lys Lys Lys Lys  
 1345 1350 1355 1360  
 Leu

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 <212> PRT  
 <213> Homo sapiens

<400> 14

Met	Pro	Pro	Phe	Leu	Leu	Leu	Glu	Ala	Val	Cys	Val	Phe	Leu	Phe	Ser
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			20					25					30		
Thr	Ile	Gly	Lys	Ile	Ser	Ala	Ala	Ser	Lys	Met	Met	Trp	Cys	Ser	Ala
		35					40					45			
Ala	Val	Asp	Ile	Met	Phe	Leu	Leu	Asp	Gly	Ser	Asn	Ser	Val	Gly	Lys
	50					55					60				
Gly	Ser	Phe	Glu	Arg	Ser	Lys	His	Phe	Ala	Ile	Thr	Val	Cys	Asp	Gly
65					70					75					80
Leu	Asp	Ile	Ser	Pro	Glu	Arg	Val	Arg	Val	Gly	Ala	Phe	Gln	Phe	Ser
				85					90					95	
Ser	Thr	Pro	His	Leu	Glu	Phe	Pro	Leu	Asp	Ser	Phe	Ser	Thr	Gln	Gln
			100					105					110		
Glu	Val	Lys	Ala	Arg	Ile	Lys	Arg	Met	Val	Phe	Lys	Gly	Gly	Arg	Thr
		115					120					125			
Glu	Thr	Glu	Leu	Ala	Leu	Lys	Tyr	Leu	Leu	His	Arg	Gly	Leu	Pro	Gly
		130				135					140				
Gly	Arg	Asn	Ala	Ser	Val	Pro	Gln	Ile	Leu	Ile	Ile	Val	Thr	Asp	Gly
145					150					155					160
Lys	Ser	Gln	Gly	Asp	Val	Ala	Leu	Pro	Ser	Lys	Gln	Leu	Lys	Glu	Arg
				165					170					175	
Gly	Val	Thr	Val	Phe	Ala	Val	Gly	Val	Arg	Phe	Pro	Arg	Trp	Glu	Glu
			180					185					190		
Leu	His	Ala	Leu	Ala	Ser	Glu	Pro	Arg	Gly	Gln	His	Val	Leu	Leu	Ala
		195					200					205			
Glu	Gln	Val	Glu	Asp	Ala	Thr	Asn	Gly	Leu	Phe	Ser	Thr	Leu	Ser	Ser
	210					215					220				
Ser	Ala	Ile	Cys	Ser	Ser	Ala	Thr	Pro	Asp	Cys	Arg	Val	Glu	Ala	His
225					230					235					240
Pro	Cys	Glu	His	Arg	Thr	Leu	Glu	Met	Val	Arg	Glu	Phe	Ala	Gly	Asn
				245					250					255	
Ala	Pro	Cys	Trp	Arg	Gly	Ser	Arg	Arg	Thr	Leu	Ala	Val	Leu	Ala	Ala
			260					265					270		
His	Cys	Pro	Phe	Tyr	Ser	Trp	Lys	Arg	Val	Phe	Leu	Thr	His	Pro	Ala
		275					280					285			
Thr	Cys	Tyr	Arg	Thr	Thr	Cys	Pro	Gly	Pro	Cys	Asp	Ser	Gln	Pro	Cys
	290					295					300				
Gln	Asn	Gly	Gly	Thr	Cys	Val	Pro	Glu	Gly	Leu	Asp	Gly	Tyr	Gln	Cys
305					310					315					320
Leu	Cys	Pro	Leu	Ala	Phe	Gly	Gly	Glu	Ala	Asn	Cys	Ala	Leu	Lys	Leu
				325					330					335	
Ser	Leu	Glu	Cys	Arg	Val	Asp	Leu	Leu	Phe	Leu	Leu	Asp	Ser	Ser	Ala
			340				345						350		
Gly	Thr	Thr	Leu	Asp	Gly	Phe	Leu	Arg	Ala	Lys	Val	Phe	Val	Lys	Arg
		355					360					365			
Phe	Val	Arg	Ala	Val	Leu	Ser	Glu	Asp	Ser	Arg	Ala	Arg	Val	Gly	Val
	370					375					380				
Ala	Thr	Tyr	Ser	Arg	Glu	Leu	Leu	Val	Ala	Val	Pro	Val	Gly	Glu	Tyr
385					390					395					400
Gln	Asp	Val	Pro	Asp	Leu	Val	Trp	Ser	Leu	Asp	Gly	Ile	Pro	Phe	Arg
				405					410					415	
Gly	Gly	Pro	Thr	Leu	Thr	Gly	Ser	Ala	Leu	Arg	Gln	Ala	Ala	Glu	Arg
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<211> 300
<212> PRT
<213> Homo sapiens
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			20					25					30		
Tyr	Asn	Lys	Tyr	Pro	Asp	Ala	Val	Ala	Thr	Trp	Leu	Asn	Pro	Asp	Pro
		35					40					45			
Ser	Gln	Lys	Gln	Asn	Leu	Leu	Ala	Pro	Gln	Thr	Leu	Pro	Ser	Lys	Ser
	50					55					60				

Asn	Glu	Ser	His	Asp	His	Met	Asp	Asp	Met	Asp	Asp	Glu	Asp	Asp	Asp	
65					70				75						80	
Asp	His	Val	Asp	Ser	Gln	Asp	Ser	Ile	Asp	Ser	Asn	Asp	Ser	Asp	Asp	
			85					90					95			
Val	Asp	Asp	Thr	Asp	Asp	Ser	His	Gln	Ser	Asp	Glu	Ser	His	His	Ser	
			100					105					110			
Asp	Glu	Ser	Asp	Glu	Leu	Val	Thr	Asp	Phe	Pro	Thr	Asp	Leu	Pro	Ala	
	115						120					125				
Thr	Glu	Val	Phe	Thr	Pro	Val	Val	Pro	Thr	Val	Asp	Thr	Tyr	Asp	Gly	
	130					135					140					
Arg	Gly	Asp	Ser	Val	Val	Tyr	Gly	Leu	Arg	Ser	Lys	Ser	Lys	Lys	Phe	
145				150						155					160	
Arg	Arg	Pro	Asp	Ile	Gln	Tyr	Pro	Asp	Ala	Thr	Asp	Glu	Asp	Ile	Thr	
			165					170						175		
Ser	His	Met	Glu	Ser	Glu	Glu	Leu	Asn	Gly	Ala	Tyr	Lys	Ala	Ile	Pro	
		180						185					190			
Val	Ala	Gln	Asp	Leu	Asn	Ala	Pro	Ser	Asp	Trp	Asp	Ser	Arg	Gly	Lys	
	195						200					205				
Asp	Ser	Tyr	Glu	Thr	Ser	Gln	Leu	Asp	Asp	Gln	Ser	Ala	Glu	Thr	His	
	210					215					220					
Ser	His	Lys	Gln	Ser	Arg	Leu	Tyr	Lys	Arg	Lys	Ala	Asn	Asp	Glu	Ser	
225					230					235					240	
Asn	Glu	His	Ser	Asp	Val	Ile	Asp	Ser	Gln	Glu	Leu	Ser	Lys	Val	Ser	
			245					250						255		
Arg	Glu	Phe	His	Ser	His	Glu	Phe	His	Ser	His	Glu	Asp	Met	Leu	Val	
		260					265						270			
Val	Asp	Pro	Lys	Ser	Lys	Glu	Glu	Asp	Lys	His	Leu	Lys	Phe	Arg	Ile	
	275						280					285				
Ser	His	Glu	Leu	Asp	Ser	Ala	Ser	Ser	Glu	Val	Asn					
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<210> 16  
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 <213> Homo sapiens

<400> 16

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Cys	Trp	Leu	Gln	Cys	Ala	Ala	Ser	Glu	Pro	Cys	Arg	Ala	Val	Phe	Arg	
		20						25					30			
Glu	Ala	Glu	Val	Thr	Leu	Glu	Ala	Gly	Gly	Ala	Glu	Gln	Glu	Pro	Gly	
	35						40					45				
Gln	Ala	Leu	Gly	Lys	Val	Phe	Met	Gly	Cys	Pro	Gly	Gln	Glu	Pro	Ala	
	50					55					60					
Leu	Phe	Ser	Thr	Asp	Asn	Asp	Asp	Phe	Thr	Val	Arg	Asn	Gly	Glu	Thr	
65				70					75					80		
Val	Gln	Glu	Arg	Arg	Ser	Leu	Lys	Glu	Arg	Asn	Pro	Leu	Lys	Ile	Phe	
			85					90					95			
Pro	Ser	Lys	Arg	Ile	Leu	Arg	Arg	His	Lys	Arg	Asp	Trp	Val	Val	Ala	
		100						105					110			
Pro	Ile	Ser	Val	Pro	Glu	Asn	Gly	Lys	Gly	Pro	Phe	Pro	Gln	Arg	Leu	
	115						120					125				
Asn	Gln	Leu	Lys	Ser	Asn	Lys	Asp	Arg	Asp	Thr	Lys	Ile	Phe	Tyr	Ser	
	130					135					140					
Ile	Thr	Gly	Pro	Gly	Ala	Asp	Ser	Pro	Pro	Glu	Gly	Val	Phe	Ala	Val	
145					150					155					160	

Glu	Lys	Glu	Thr	Gly	Trp	Leu	Leu	Leu	Asn	Lys	Pro	Leu	Asp	Arg	Glu	165	170	175
Glu	Ile	Ala	Lys	Tyr	Glu	Leu	Phe	Gly	His	Ala	Val	Ser	Glu	Asn	Gly	180	185	190
Ala	Ser	Val	Glu	Asp	Pro	Met	Asn	Ile	Ser	Ile	Ile	Val	Thr	Asp	Gln	195	200	205
Asn	Asp	His	Lys	Pro	Lys	Phe	Thr	Gln	Asp	Thr	Phe	Arg	Gly	Ser	Val	210	215	220
Leu	Glu	Gly	Val	Leu	Pro	Gly	Thr	Ser	Val	Met	Gln	Val	Thr	Ala	Thr	225	230	235
Asp	Glu	Asp	Asp	Ala	Ile	Tyr	Thr	Tyr	Asn	Gly	Val	Val	Ala	Tyr	Ser	245	250	255
Ile	His	Ser	Gln	Glu	Pro	Lys	Asp	Pro	His	Asp	Leu	Met	Phe	Thr	Ile	260	265	270
His	Arg	Ser	Thr	Gly	Thr	Ile	Ser	Val	Ile	Ser	Ser	Gly	Leu	Asp	Arg	275	280	285
Glu	Lys	Val	Pro	Glu	Tyr	Thr	Leu	Thr	Ile	Gln	Ala	Thr	Asp	Met	Asp	290	295	300
Gly	Asp	Gly	Ser	Thr	Thr	Thr	Ala	Val	Ala	Val	Val	Glu	Ile	Leu	Asp	305	310	315
Ala	Asn	Asp	Asn	Ala	Pro	Met	Phe	Asp	Pro	Gln	Lys	Tyr	Glu	Ala	His	325	330	335
Val	Pro	Glu	Asn	Ala	Val	Gly	His	Glu	Val	Gln	Arg	Leu	Thr	Val	Thr	340	345	350
Asp	Leu	Asp	Ala	Pro	Asn	Ser	Pro	Ala	Trp	Arg	Ala	Thr	Tyr	Leu	Ile	355	360	365
Met	Gly	Gly	Asp	Asp	Gly	Asp	His	Phe	Thr	Ile	Thr	Thr	His	Pro	Glu	370	375	380
Ser	Asn	Gln	Gly	Ile	Leu	Thr	Thr	Arg	Lys	Gly	Leu	Asp	Phe	Glu	Ala	385	390	395
Lys	Asn	Gln	His	Thr	Leu	Tyr	Val	Glu	Val	Thr	Asn	Glu	Ala	Pro	Phe	405	410	415
Val	Leu	Lys	Leu	Pro	Thr	Ser	Thr	Ala	Thr	Ile	Val	Val	His	Val	Glu	420	425	430
Asp	Val	Asn	Glu	Ala	Pro	Val	Phe	Val	Pro	Pro	Ser	Lys	Val	Val	Glu	435	440	445
Val	Gln	Glu	Gly	Ile	Pro	Thr	Gly	Glu	Pro	Val	Cys	Val	Tyr	Thr	Ala	450	455	460
Glu	Asp	Pro	Asp	Lys	Glu	Asn	Gln	Lys	Ile	Ser	Tyr	Arg	Ile	Leu	Arg	465	470	475
Asp	Pro	Ala	Gly	Trp	Leu	Ala	Met	Asp	Pro	Asp	Ser	Gly	Gln	Val	Thr	485	490	495
Ala	Val	Gly	Thr	Leu	Asp	Arg	Glu	Asp	Glu	Gln	Phe	Val	Arg	Asn	Asn	500	505	510
Ile	Tyr	Glu	Val	Met	Val	Leu	Ala	Met	Asp	Asn	Gly	Ser	Pro	Pro	Thr	515	520	525
Thr	Gly	Thr	Gly	Thr	Leu	Leu	Leu	Thr	Leu	Ile	Asp	Val	Asn	Asp	His	530	535	540
Gly	Pro	Val	Pro	Glu	Pro	Arg	Gln	Ile	Thr	Ile	Cys	Asn	Gln	Ser	Pro	545	550	555
Val	Arg	Gln	Val	Leu	Asn	Ile	Thr	Asp	Lys	Asp	Leu	Ser	Pro	His	Thr	565	570	575
Ser	Pro	Phe	Gln	Ala	Gln	Leu	Thr	Asp	Asp	Ser	Asp	Ile	Tyr	Trp	Thr	580	585	590
Ala	Glu	Val	Asn	Glu	Glu	Gly	Asp	Thr	Val	Val	Leu	Ser	Leu	Lys	Lys	595	600	605
Phe	Leu	Lys	Gln	Asp	Thr	Tyr	Asp	Val	His	Leu	Ser	Leu	Ser	Asp	His	610	615	620

Gly Asn Lys Glu Gln Leu Thr Val Ile Arg Ala Thr Val Cys Asp Cys  
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 His Gly His Val Glu Thr Cys Pro Gly Pro Trp Lys Gly Gly Phe Ile  
 645 650 655  
 Leu Pro Val Leu Gly Ala Val Leu Ala Leu Leu Phe Leu Leu Val  
 660 665 670  
 Leu Leu Leu Leu Val Arg Lys Lys Arg Lys Ile Lys Glu Pro Leu Leu  
 675 680 685  
 Leu Pro Glu Asp Asp Thr Arg Asp Asn Val Phe Tyr Tyr Gly Glu Glu  
 690 695 700  
 Gly Gly Gly Glu Glu Asp Gln Asp Tyr Asp Ile Thr Gln Leu His Arg  
 705 710 715 720  
 Gly Leu Glu Ala Arg Pro Glu Val Val Leu Arg Asn Asp Val Ala Pro  
 725 730 735  
 Thr Ile Ile Pro Thr Pro Met Tyr Arg Pro Arg Pro Ala Asn Pro Asp  
 740 745 750  
 Glu Ile Gly Asn Phe Ile Ile Glu Asn Leu Lys Ala Ala Asn Thr Asp  
 755 760 765  
 Pro Thr Ala Pro Pro Tyr Asp Thr Leu Leu Val Phe Asp Tyr Glu Gly  
 770 775 780  
 Ser Gly Ser Asp Ala Ala Ser Leu Ser Ser Leu Thr Ser Ser Ala Ser  
 785 790 795 800  
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 Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe  
 35 40 45  
 Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala  
 50 55 60  
 Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu  
 65 70 75 80  
 Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg  
 85 90 95  
 Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu  
 100 105 110  
 Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu  
 115 120 125  
 Gly Ala Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp  
 130 135 140  
 Gly Gly Ser Gln Ala Val Gln Gly Gly Gly Asp Pro Arg Ala Ala  
 145 150 155 160  
 Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Lys Ala Pro Ala Glu  
 165 170 175  
 Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn  
 180 185 190

Gly	Val	Leu	Arg	Glu	Lys	His	Glu	Ala	Val	Asp	His	Ser	Ser	Gln	His
	195						200					205			
Glu	Glu	Asn	Glu	Glu	Arg	Val	Ser	Ala	Gln	Lys	Glu	Asn	Ser	Leu	Gln
	210					215					220				
Gln	Asn	Asp	Asp	Asp	Glu	Asn	Lys	Ile	Ala	Glu	Lys	Pro	Asp	Trp	Glu
225					230					235					240
Ala	Glu	Lys	Thr	Thr	Glu	Ser	Arg	Asn	Glu	Arg	His	Leu	Asn	Gly	Thr
			245						250					255	
Asp	Thr	Ser	Phe	Ser	Leu	Glu	Asp	Leu	Phe	Gln	Leu	Leu	Ser	Ser	Gln
			260					265					270		
Pro	Glu	Asn	Ser	Leu	Glu	Gly	Ile	Ser	Leu	Gly	Asp	Ile	Pro	Leu	Pro
		275					280					285			
Gly	Ser	Ile	Ser	Asp	Gly	Met	Asn	Ser	Ser	Ala	His	Tyr	His	Val	Asn
	290					295					300				
Phe	Ser	Gln	Ala	Ile	Ser	Gln	Asp	Val	Asn	Leu	His	Glu	Ala	Ile	Leu
305					310					315					320
Leu	Cys	Pro	Asn	Asn	Thr	Phe	Arg	Arg	Asp	Pro	Thr	Ala	Arg	Thr	Ser
				325					330					335	
Gln	Ser	Gln	Glu	Pro	Phe	Leu	Gln	Leu	Asn	Ser	His	Thr	Thr	Asn	Pro
			340					345					350		
Glu	Gln	Thr	Leu	Pro	Gly	Thr	Asn	Leu	Thr	Gly	Phe	Leu	Ser	Pro	Val
	355						360					365			
Asp	Asn	His	Met	Arg	Asn	Leu	Thr	Ser	Gln	Asp	Leu	Leu	Tyr	Asp	Leu
	370					375					380				
Asp	Ile	Asn	Ile	Phe	Asp	Glu	Ile	Asn	Leu	Met	Ser	Leu	Ala	Thr	Glu
385					390					395					400
Asp	Asn	Phe	Asp	Pro	Ile	Asp	Val	Ser	Gln	Leu	Phe	Asp	Glu	Pro	Asp
				405					410					415	
Ser	Asp	Ser	Gly	Leu	Ser	Leu	Asp	Ser	Ser	His	Asn	Asn	Thr	Ser	Val
			420					425					430		
Ile	Lys	Ser	Asn	Ser	Ser	His	Ser	Val	Cys	Asp	Glu	Gly	Ala	Ile	Gly
	435						440					445			
Tyr	Cys	Thr	Asp	His	Glu	Ser	Ser	Ser	His	His	Asp	Leu	Glu	Gly	Ala
	450					455					460				
Val	Gly	Gly	Tyr	Tyr	Pro	Glu	Pro	Ser	Lys	Leu	Cys	His	Leu	Asp	Gln
465					470					475					480
Ser	Asp	Ser	Asp	Phe	His	Gly	Asp	Leu	Thr	Phe	Gln	His	Val	Phe	His
				485					490					495	
Asn	His	Thr	Tyr	His	Leu	Gln	Pro	Thr	Ala	Pro	Glu	Ser	Thr	Ser	Glu
			500					505					510		
Pro	Phe	Pro	Trp	Pro	Gly	Lys	Ser	Gln	Lys	Ile	Arg	Ser	Arg	Tyr	Leu
		515					520					525			
Glu	Asp	Thr	Asp	Arg	Asn	Leu	Ser	Arg	Asp	Glu	Gln	Arg	Ala	Lys	Ala
	530					535					540				
Leu	His	Ile	Pro	Phe	Ser	Val	Asp	Glu	Ile	Val	Gly	Met	Pro	Val	Asp
545					550					555					560
Ser	Phe	Asn	Ser	Met	Leu	Ser	Arg	Tyr	Tyr	Leu	Thr	Asp	Leu	Gln	Val
				565					570					575	
Ser	Leu	Ile	Arg	Asp	Ile	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Val	Ala	Ala
			580					585					590		
Gln	Asn	Cys	Arg	Lys	Arg	Lys	Leu	Asp	Ile	Ile	Leu	Asn	Leu	Glu	Asp
		595					600					605			
Asp	Val	Cys	Asn	Leu	Gln	Ala	Lys	Lys	Glu	Thr	Leu	Lys	Arg	Glu	Gln
	610					615					620				
Ala	Gln	Cys	Asn	Lys	Ala	Ile	Asn	Ile	Met	Lys	Gln	Lys	Leu	His	Asp
625					630					635					640
Leu	Tyr	His	Asp	Ile	Phe	Ser	Arg	Leu	Arg	Asp	Asp	Gln	Gly	Arg	Pro
				645					650					655	



Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile  
                   660                  665                  670  
 Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr  
                   675                  680                  685  
 Gln Lys Gly Lys Arg Lys  
                   690

<210> 18  
 <211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 18  
 Met Lys Leu Glu Val Phe Val Pro Arg Ala Ala His Gly Asp Lys Gln  
   1                  5                  10                  15  
 Gly Ser Asp Leu Glu Gly Ala Gly Gly Ser Asp Ala Pro Ser Pro Leu  
                   20                  25                  30  
 Ser Ala Ala Gly Asp Asp Ser Leu Gly Ser Asp Gly Asp Cys Ala Ala  
                   35                  40                  45  
 Lys Pro Ser Ala Gly Gly Gly Ala Arg Asp Thr Gln Gly Asp Gly Glu  
   50                  55                  60  
 Gln Ser Ala Gly Gly Gly Pro Gly Ala Glu Glu Ala Ile Pro Ala Ala  
   65                  70                  75                  80  
 Ala Ala Ala Ala Val Val Ala Glu Gly Ala Glu Ala Gly Ala Ala Gly  
                   85                  90                  95  
 Pro Gly Ala Gly Gly Ala Gly Ser Gly Glu Gly Ala Arg Ser Lys Pro  
                   100                  105                  110  
 Tyr Thr Arg Arg Pro Lys Pro Pro Tyr Ser Tyr Ile Ala Leu Ile Ala  
                   115                  120                  125  
 Met Ala Ile Arg Asp Ser Ala Gly Gly Arg Leu Thr Leu Ala Glu Ile  
   130                  135                  140  
 Asn Glu Tyr Leu Met Gly Lys Phe Pro Phe Phe Arg Gly Ser Tyr Thr  
  145                  150                  155                  160  
 Gly Trp Arg Asn Ser Val Arg His Asn Leu Ser Leu Asn Asp Cys Phe  
                   165                  170                  175  
 Val Lys Val Leu Arg Asp Pro Ser Arg Pro Trp Gly Lys Asp Asn Tyr  
                   180                  185                  190  
 Trp Met Leu Asn Pro Asn Ser Glu Tyr Thr Phe Ala Asp Gly Val Phe  
  195                  200                  205  
 Arg Arg Arg Arg Lys Arg Leu Ser His Arg Ala Pro Val Pro Ala Pro  
  210                  215                  220  
 Gly Leu Arg Pro Glu Glu Ala Pro Gly Leu Pro Ala Ala Pro Pro Pro  
  225                  230                  235                  240  
 Ala Pro Ala Ala Pro Ala Ser Pro Arg Met Arg Ser Pro Ala Arg Gln  
                   245                  250                  255  
 Glu Glu Arg Ala Ser Pro Ala Gly Lys Phe Ser Ser Ser Phe Ala Ile  
                   260                  265                  270  
 Asp Ser Ile Leu Arg Lys Pro Phe Arg Ser Arg Arg Leu Arg Asp Thr  
                   275                  280                  285  
 Ala Pro Gly Thr Thr Leu Gln Trp Gly Ala Ala Pro Cys Pro Pro Leu  
  290                  295                  300  
 Pro Ala Phe Pro Ala Leu Leu Pro Ala Ala Pro Cys Arg Ala Leu Leu  
  305                  310                  315                  320  
 Pro Leu Cys Ala Tyr Gly Ala Gly Glu Pro Ala Arg Leu Gly Ala Arg  
                   325                  330                  335  
 Glu Ala Glu Val Pro Pro Thr Ala Pro Pro Leu Leu Leu Ala Pro Leu  
                   340                  345                  350

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Pro Ala Ala Ala Pro Ala Lys Pro Leu Arg Gly Pro Ala Ala Gly Gly
      355                      360                      365
Ala His Leu Tyr Cys Pro Leu Arg Leu Pro Ala Ala Leu Gln Ala Ala
      370                      375                      380
Leu Val Arg Arg Pro Gly Pro His Leu Ser Tyr Pro Val Glu Thr Leu
      385                      390                      395                      400
Leu Ala

```

```

<210> 19
<211> 209
<212> PRT
<213> Homo sapiens

```

```

<400> 19
Met Glu Lys His His Val Pro Ser Asp Phe Asn Val Asn Val Lys Val
  1          5          10          15
Asp Thr Gly Pro Arg Glu Asp Leu Ile Lys Val Leu Glu Asp Met Arg
      20          25          30
Gln Glu Tyr Glu Leu Ile Ile Lys Lys His Arg Asp Leu Asp Thr
      35          40          45
Trp Tyr Lys Glu Gln Ser Ala Ala Met Ser Gln Glu Ala Ala Ser Pro
      50          55          60
Ala Thr Val Gln Ser Arg Gln Gly Asp Ile His Glu Leu Lys Arg Thr
      65          70          75          80
Phe Gln Ala Leu Glu Ile Asp Leu Gln Ala Gln Tyr Ser Thr Lys Ser
      85          90          95
Ala Leu Glu Asn Met Leu Ser Glu Thr Gln Ser Arg Tyr Ser Cys Lys
      100          105          110
Leu Gln Asp Met Gln Glu Ile Ile Ser His Tyr Glu Glu Glu Leu Thr
      115          120          125
Gln Leu Arg His Glu Leu Glu Arg Gln Asn Asn Glu Tyr Gln Val Leu
      130          135          140
Leu Gly Ile Lys Thr His Leu Glu Lys Glu Ile Thr Thr Tyr Arg Arg
      145          150          155          160
Leu Leu Glu Gly Glu Ser Glu Gly Thr Arg Glu Glu Ser Lys Ser Ser
      165          170          175
Met Lys Val Ser Ala Thr Pro Lys Ile Lys Ala Ile Thr Gln Glu Thr
      180          185          190
Ile Asn Gly Arg Leu Val Leu Cys Gln Val Asn Glu Ile Gln Lys His
      195          200          205
Ala

```

```

<210> 20
<211> 278
<212> PRT
<213> Homo sapiens

```

```

<400> 20
Met Asp Lys Ser Gly Ile Asp Ser Leu Asp His Val Thr Ser Asp Ala
  1          5          10          15
Val Glu Leu Ala Asn Arg Ser Asp Asn Ser Ser Asp Ser Ser Leu Phe
      20          25          30
Lys Thr Gln Cys Ile Pro Tyr Ser Pro Lys Gly Glu Lys Arg Asn Pro
      35          40          45

```

```

Ile Arg Lys Phe Val Arg Thr Pro Glu Ser Val His Ala Ser Asp Ser
 50          55          60
Ser Ser Asp Ser Ser Phe Glu Pro Ile Pro Leu Thr Ile Lys Ala Ile
 65          70          75          80
Phe Glu Arg Phe Lys Asn Arg Lys Lys Arg Tyr Lys Lys Lys Lys Lys
      85          90          95
Arg Arg Tyr Gln Pro Thr Gly Arg Pro Arg Gly Arg Pro Glu Gly Arg
      100          105          110
Arg Asn Pro Ile Tyr Ser Leu Ile Asp Lys Lys Lys Lys Gln Phe Arg Ser
      115          120          125
Arg Gly Ser Gly Phe Pro Phe Leu Glu Ser Glu Asn Glu Lys Asn Ala
      130          135          140
Pro Trp Arg Lys Ile Leu Thr Phe Glu Gln Ala Val Ala Arg Gly Phe
      145          150          155          160
Phe Asn Tyr Ile Glu Lys Leu Lys Tyr Glu His His Leu Lys Glu Ser
      165          170          175
Leu Lys Gln Met Asn Val Gly Glu Asp Leu Glu Asn Glu Asp Phe Asp
      180          185          190
Ser Arg Arg Tyr Lys Phe Leu Asp Asp Asp Gly Ser Ile Ser Pro Ile
      195          200          205
Glu Glu Ser Thr Ala Glu Asp Glu Asp Ala Thr His Leu Glu Asp Asn
      210          215          220
Glu Cys Asp Ile Lys Leu Ala Gly Asp Ser Phe Ile Val Ser Ser Glu
      225          230          235          240
Phe Pro Val Arg Leu Ser Val Tyr Leu Glu Glu Glu Asp Ile Thr Glu
      245          250          255
Glu Ala Ala Leu Ser Lys Lys Arg Ala Thr Lys Ala Lys Asn Thr Gly
      260          265          270
Gln Arg Gly Leu Lys Met
      275

```

```

<210> 21
<211> 488
<212> PRT
<213> Homo sapiens

```

```

<400> 21
Ala Val Leu Ala Ala His Cys Pro Phe Tyr Ser Trp Lys Arg Val Phe
 1          5          10          15
Leu Thr His Pro Ala Thr Cys Tyr Arg Thr Thr Cys Pro Gly Pro Cys
      20          25          30
Asp Ser Gln Pro Cys Gln Asn Gly Gly Thr Cys Val Pro Glu Gly Leu
      35          40          45
Asp Gly Tyr Gln Cys Leu Cys Pro Leu Ala Phe Gly Gly Glu Ala Asn
      50          55          60
Cys Ala Leu Lys Leu Ser Leu Glu Cys Arg Val Asp Leu Leu Phe Leu
      65          70          75          80
Leu Asp Ser Ser Ala Gly Thr Thr Leu Asp Gly Phe Leu Arg Ala Lys
      85          90          95
Val Phe Val Lys Arg Phe Val Arg Ala Val Leu Ser Glu Asp Ser Arg
      100          105          110
Ala Arg Val Gly Val Ala Thr Tyr Ser Arg Glu Leu Leu Val Ala Val
      115          120          125
Pro Val Gly Glu Tyr Gln Asp Val Pro Asp Leu Val Trp Ser Leu Asp
      130          135          140
Gly Ile Pro Phe Arg Gly Gly Pro Thr Leu Thr Gly Ser Ala Leu Arg
      145          150          155          160

```

```
<210> 22
<211> 13
<212> PRT
<213> Homo sapiens

<400> 22
Ala Val Leu Ala Ala His Cys Pro Phe Tyr Ser Trp Lys
 1             5             10
```

```
<210> 23
<211> 403
<212> PRT
<213> Homo sapiens
```

&lt;400&gt; 23

```

Met Lys Leu Glu Val Phe Val Pro Arg Ala Ala His Gly Asp Lys Gln
 1      5      10      15
Gly Ser Asp Leu Glu Gly Ala Gly Gly Ser Asp Ala Pro Ser Pro Leu
 20      25      30
Ser Ala Ala Gly Asp Asp Ser Leu Gly Ser Asp Gly Asp Cys Ala Ala
 35      40      45
Asn Ser Pro Ala Ala Gly Gly Gly Ala Arg Asp Thr Gln Gly Asp Gly
 50      55      60
Glu Gln Ser Ala Gly Gly Gly Pro Gly Ala Glu Glu Ala Ile Pro Ala
 65      70      75      80
Ala Ala Ala Ala Ala Val Val Ala Glu Gly Ala Glu Ala Gly Ala Ala
 85      90      95
Gly Pro Gly Ala Gly Gly Ala Gly Ser Gly Glu Gly Ala Arg Ser Lys
100      105      110
Pro Tyr Thr Arg Arg Pro Lys Pro Pro Tyr Ser Tyr Ile Ala Leu Ile
115      120      125
Ala Met Ala Ile Arg Asp Ser Ala Gly Gly Arg Leu Thr Leu Ala Glu
130      135      140
Ile Asn Glu Tyr Leu Met Gly Lys Phe Pro Phe Phe Arg Gly Ser Tyr
145      150      155      160
Thr Gly Trp Arg Asn Ser Val Arg His Asn Leu Ser Leu Asn Asp Cys
165      170      175
Phe Val Lys Val Leu Arg Asp Pro Ser Arg Pro Trp Gly Lys Asp Asn
180      185      190
Tyr Trp Met Leu Asn Pro Asn Ser Glu Tyr Thr Phe Ala Asp Gly Val
195      200      205
Phe Arg Arg Arg Arg Lys Arg Leu Ser His Arg Ala Pro Val Pro Ala
210      215      220
Pro Gly Leu Arg Pro Glu Glu Ala Pro Gly Leu Pro Ala Ala Pro Pro
225      230      235      240
Pro Ala Pro Ala Ala Pro Ala Ser Pro Arg Met Arg Ser Pro Ala Arg
245      250      255
Gln Glu Glu Arg Ala Ser Pro Ala Gly Lys Phe Ser Ser Ser Phe Ala
260      265      270
Ile Asp Ser Ile Leu Arg Lys Pro Phe Arg Ser Arg Arg Leu Arg Asp
275      280      285
Thr Ala Pro Gly Thr Thr Leu Gln Trp Gly Ala Ala Pro Cys Pro Pro
290      295      300
Leu Pro Ala Phe Pro Ala Leu Leu Pro Ala Ala Pro Cys Arg Ala Leu
305      310      315      320
Leu Pro Leu Cys Ala Tyr Gly Ala Gly Glu Pro Ala Arg Leu Gly Ala
325      330      335
Arg Glu Ala Glu Val Pro Pro Thr Ala Pro Pro Leu Leu Leu Ala Pro
340      345      350
Leu Pro Ala Ala Ala Pro Ala Lys Pro Leu Arg Gly Pro Ala Ala Gly
355      360      365
Gly Ala His Leu Tyr Cys Pro Leu Arg Leu Pro Ala Ala Leu Gln Ala
370      375      380
Ala Ser Val Arg Arg Pro Gly Pro His Leu Pro Tyr Pro Val Glu Thr
385      390      395      400
Leu Leu Ala

```

&lt;210&gt; 24

&lt;211&gt; 400

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 24

Met	Lys	Leu	Glu	Val	Phe	Val	Pro	Arg	Ala	Ala	His	Gly	Asp	Lys	Met
1				5					10					15	
Gly	Ser	Asp	Leu	Glu	Gly	Ala	Gly	Ser	Ser	Asp	Val	Pro	Ser	Pro	Leu
		20						25					30		
Ser	Ala	Ala	Gly	Asp	Asp	Ser	Leu	Gly	Ser	Asp	Gly	Asp	Cys	Ala	Ala
		35					40					45			
Asn	Ser	Pro	Ala	Ala	Gly	Ser	Gly	Ala	Gly	Asp	Leu	Glu	Gly	Gly	Gly
	50					55					60				
Gly	Glu	Arg	Asn	Ser	Ser	Gly	Gly	Pro	Ser	Ala	Gln	Asp	Gly	Pro	Glu
65					70					75					80
Ala	Thr	Asp	Asp	Ser	Arg	Thr	Gln	Ala	Ser	Ala	Ala	Gly	Pro	Cys	Ala
				85					90					95	
Gly	Gly	Val	Gly	Gly	Gly	Glu	Gly	Ala	Arg	Ser	Lys	Pro	Tyr	Thr	Arg
		100						105					110		
Arg	Pro	Lys	Pro	Pro	Tyr	Ser	Tyr	Ile	Ala	Leu	Ile	Ala	Met	Ala	Ile
	115						120						125		
Arg	Asp	Ser	Ala	Gly	Gly	Arg	Leu	Thr	Leu	Ala	Glu	Ile	Asn	Glu	Tyr
	130					135					140				
Leu	Met	Gly	Lys	Phe	Pro	Phe	Phe	Arg	Gly	Ser	Tyr	Thr	Gly	Trp	Arg
145					150					155					160
Asn	Ser	Val	Arg	His	Asn	Leu	Ser	Leu	Asn	Asp	Cys	Phe	Val	Lys	Val
				165					170					175	
Leu	Arg	Asp	Pro	Ser	Arg	Pro	Trp	Gly	Lys	Asp	Asn	Tyr	Trp	Met	Leu
		180						185					190		
Asn	Pro	Asn	Ser	Glu	Tyr	Thr	Phe	Ala	Asp	Gly	Val	Phe	Arg	Arg	Arg
	195						200						205		
Arg	Lys	Arg	Leu	Ser	His	Arg	Thr	Thr	Val	Ser	Ala	Ser	Gly	Leu	Arg
	210					215					220				
Pro	Glu	Glu	Ala	Pro	Pro	Gly	Pro	Ala	Gly	Thr	Pro	Gln	Pro	Ala	Pro
225					230					235					240
Ala	Ala	Arg	Ser	Ser	Pro	Ile	Ala	Arg	Ser	Pro	Ala	Arg	Gln	Glu	Glu
				245					250					255	
Arg	Ser	Ser	Pro	Ala	Ser	Lys	Phe	Ser	Ser	Ser	Phe	Ala	Ile	Asp	Ser
			260					265					270		
Ile	Leu	Ser	Lys	Pro	Phe	Arg	Ser	Arg	Arg	Asp	Gly	Asp	Ser	Ala	Leu
	275						280					285			
Gly	Val	Gln	Leu	Pro	Trp	Gly	Ala	Ala	Pro	Cys	Pro	Pro	Leu	Arg	Ala
	290					295					300				
Tyr	Pro	Ala	Leu	Leu	Pro	Ala	Ala	Pro	Gly	Gly	Ala	Leu	Leu	Pro	Leu
305					310					315					320
Cys	Ala	Tyr	Gly	Ala	Ser	Glu	Pro	Thr	Leu	Leu	Ala	Ser	Arg	Gly	Thr
				325					330					335	
Glu	Val	Gln	Pro	Ala	Ala	Pro	Leu	Leu	Leu	Ala	Pro	Leu	Ser	Thr	Ala
			340					345					350		
Ala	Pro	Ala	Lys	Pro	Phe	Arg	Gly	Pro	Glu	Thr	Ala	Gly	Ala	Ala	His
		355					360					365			
Leu	Tyr	Cys	Pro	Leu	Arg	Leu	Pro	Thr	Ala	Leu	Gln	Ala	Ala	Ala	Ala
	370					375					380				
Cys	Gly	Pro	Gly	Pro	His	Leu	Ser	Tyr	Pro	Val	Glu	Thr	Leu	Leu	Ala
385					390					395					400

&lt;210&gt; 25

&lt;211&gt; 400

&lt;212&gt; PRT

&lt;213&gt; Rattus rattus

&lt;400&gt; 25

Met	Lys	Leu	Glu	Val	Phe	Ala	Pro	Arg	Ala	Ala	His	Gly	Asp	Lys	Met
1				5					10					15	
Gly	Ser	Asp	Leu	Glu	Gly	Ala	Gly	Ser	Ser	Asp	Val	Pro	Ser	Pro	Leu
		20						25					30		
Ser	Ala	Ala	Gly	Asp	Asp	Ser	Leu	Gly	Ser	Asp	Gly	Asp	Cys	Ala	Ala
		35					40					45			
Asn	Ser	Pro	Ala	Ala	Gly	Arg	Gly	Ala	Val	Asp	Leu	Glu	Gly	Gly	Gly
	50					55					60				
Gly	Glu	Arg	Asn	Ser	Ser	Gly	Gly	Ala	Ser	Thr	Gln	Asp	Asp	Pro	Glu
65					70					75				80	
Val	Thr	Asp	Gly	Ser	Arg	Thr	Gln	Ala	Ser	Pro	Val	Gly	Pro	Cys	Ala
			85						90					95	
Gly	Ser	Val	Gly	Gly	Gly	Glu	Gly	Ala	Arg	Ser	Lys	Pro	Tyr	Thr	Arg
		100						105					110		
Arg	Pro	Lys	Pro	Pro	Tyr	Ser	Tyr	Ile	Ala	Leu	Ile	Ala	Met	Ala	Ile
		115					120						125		
Arg	Asp	Ser	Ala	Gly	Gly	Arg	Leu	Thr	Leu	Ala	Glu	Ile	Asn	Glu	Tyr
	130					135					140				
Leu	Met	Gly	Lys	Phe	Pro	Phe	Phe	Arg	Gly	Ser	Tyr	Thr	Gly	Trp	Arg
145					150					155				160	
Asn	Ser	Val	Arg	His	Asn	Leu	Ser	Leu	Asn	Asp	Cys	Phe	Val	Lys	Val
				165					170					175	
Leu	Arg	Asp	Pro	Ser	Arg	Pro	Trp	Gly	Lys	Asp	Asn	Tyr	Trp	Met	Leu
		180					185						190		
Asn	Pro	Asn	Ser	Glu	Tyr	Thr	Phe	Ala	Asp	Gly	Val	Phe	Arg	Arg	Arg
		195					200					205			
Arg	Lys	Arg	Leu	Ser	His	Arg	Thr	Thr	Val	Ser	Ala	Ser	Gly	Leu	Arg
	210					215					220				
Pro	Glu	Glu	Ala	Pro	Pro	Gly	Pro	Ala	Gly	Thr	Pro	Gln	Pro	Ala	Pro
225					230					235				240	
Thr	Ala	Gly	Ser	Ser	Pro	Ile	Ala	Arg	Ser	Pro	Ala	Arg	Gln	Glu	Glu
				245					250					255	
Gly	Ser	Ser	Pro	Ala	Ser	Lys	Phe	Ser	Ser	Ser	Phe	Ala	Ile	Asp	Ser
		260					265						270		
Ile	Leu	Ser	Lys	Pro	Phe	Arg	Ser	Arg	Arg	Asp	Gly	Asp	Pro	Ala	Leu
	275						280					285			
Gly	Val	Gln	Leu	Pro	Trp	Ser	Ala	Ala	Pro	Cys	Pro	Pro	Leu	Arg	Ala
	290					295					300				
Tyr	Pro	Ala	Leu	Leu	Pro	Ala	Ser	Ser	Gly	Gly	Ala	Leu	Leu	Pro	Leu
305					310					315				320	
Cys	Ala	Tyr	Gly	Ala	Gly	Glu	Pro	Thr	Leu	Leu	Ala	Ser	Arg	Gly	Ala
			325						330					335	
Glu	Val	Gln	Pro	Ala	Ala	Pro	Leu	Leu	Leu	Ala	Pro	Leu	Ser	Thr	Ala
			340					345					350		
Ala	Pro	Ala	Lys	Pro	Phe	Arg	Gly	Pro	Glu	Thr	Ala	Gly	Ala	Ala	His
		355					360					365			
Leu	Tyr	Cys	Pro	Leu	Arg	Leu	Pro	Thr	Ala	Leu	Gln	Ala	Ala	Ala	Ala
	370					375					380				
Cys	Gly	Pro	Gly	Pro	His	Leu	Ser	Tyr	Arg	Val	Glu	Thr	Leu	Leu	Ala
385					390					395					400

&lt;210&gt; 26

&lt;211&gt; 1212

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 26

atgaagttgg aggtgttcgt cctcgcgcg gccacgggg acaagcaggg cagtgcctg 60

gagggcgcg	gcggcagcga	cgcgccgtcc	ccgctgtcgg	cggcgggaga	cgactccctg	120
ggctcagatg	gggactgcgc	ggccaacagc	ccggccgcgg	gcggcgggcg	cagagatacg	180
cagggcgacg	gcgaacagag	tgcgggaggc	gggcccggcg	cggaggaggc	gatcccggca	240
gcagctgctg	cagcgggtgt	ggcggagggc	gcggaggccg	gggcggcggg	gccaggcgcg	300
ggcggcgcg	ggagcggcga	gggtgcacgc	agcaagccat	atacgcggcg	gccaagccc	360
ccctactcgt	acatcgcgct	catcgccatg	gccatccgcg	actcggcggg	cgggcgcttg	420
acgctggcgg	agatcaacga	gtacctcatg	ggcaagtcc	cctttttccg	cggcagctac	480
acgggctggc	gcaactccgt	gcgccacaac	ctttcgctca	acgactgctt	cgtcaagggtg	540
ctgcgcgacc	cctcgcggcc	ctggggcaag	gacaactact	ggatgctcaa	ccccaacagc	600
gagtacacct	tcgccgacgg	ggtcttccgc	cgccgcgcga	agcgccctcag	ccaccgcgcg	660
ccggtccccg	cgcccgggct	gcggcccag	gaggcccccg	gcctccccgc	cgccccgcgc	720
cccgcgcccc	ccgccccggc	ctcgccccgc	atgcgctcgc	ccgcccgcga	ggaggagcgc	780
gccagccccg	cgggcaagtt	ctccagctcc	ttcgccatcg	acagcatcct	gcgcaagccc	840
ttccgcagcc	gccgcctcag	ggacacggcc	cccgggacga	cgcttcagtg	gggcgcgcgc	900
ccctgcccgc	cgctgcccgc	gttccccgcg	ctcctccccg	cggcgccttg	cagggccctg	960
ctgcgcgtct	gcgcgtacgg	cgcgggcgag	ccggcgcgccg	tgggcgcgcg	cgaggccgag	1020
gtgccaccga	ccgcgcggcc	cctcctgctt	gcacctctcc	cggcggcggc	ccccgccaag	1080
ccactccgag	gcccggcggc	cggcggcgcg	cacctgtact	gccccctgcg	gctgcccgca	1140
gccctgcagg	cggcctcagt	ccgcccgcct	ggcccgcacc	tgccgtaccc	ggtggagacg	1200
ctgctagctt	ga					1212

&lt;210&gt; 27

&lt;211&gt; 1203

&lt;212&gt; DNA

&lt;213&gt; Mus musculus

&lt;400&gt; 27

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&lt;212&gt; DNA

&lt;213&gt; Rattus rattus

&lt;400&gt; 28

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